

Signet

4 Channel Digital Video Recorder / Camera Kit

Model No QV-3020



USER'S MANUAL

Important Note:

Please keep this manual in a safe location in case you need to refer to it at a later date.

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Chapter 1: DVR Features

- Embedded Camera Power Supply.
- Simple Connection Method.
- Motion Detection.
- Scheduled / Motion Triggered Recording.
- PC Backup & Playback.
- Built in 320GB WD AV Surveillance Hard Drive.
- Remote Control.

Chapter 2: Layout-2.1 Front Panel



CH1	Select / Display Channel #1
CH2	Select / Display Channel #2
CH3	Select / Display Channel #3
CH4	Select / Display Channel #4
■ Quad	Quad Display
◀◀ REW	Rewind
 Pause	Pause
▶ Play	Play / List Recordings
▶▶ FWD	Fast Forward
■ Stop	Stop Recording / Playback
● REC	Record
Menu/Esc	Enter / Exit Menu
SEL/Edit	Select / Modify Item
▲ Up	Move Up / Left
▼ Down	Move Down / Right
PWR	Power Indicator
HDD	Hard Disk Drive Activity LED

Chapter 2: Layout - 2.2 Rear Panel

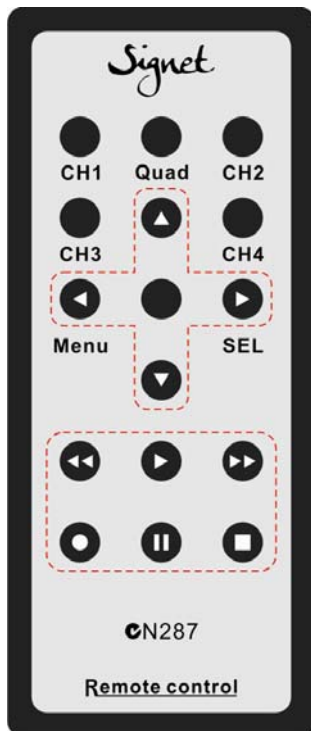


Diagram illustrating the rear panel layout with labels and connections:

- Video output**: Points to the BNC connector.
- Camera Inputs**: Points to the CH1, CH2, CH3, and CH4 ports.
- Power Supply Input**: Points to the DC 12V jack.
- Ground Terminal**: Points to the ground screw terminal.

Note: The USB port is located on the right hand side of the case.

Chapter 2: Layout - 2.3 Remote Control



CH1	Select / Display Channel #1
CH2	Select / Display Channel #2
CH3	Select / Display Channel #3
CH4	Select / Display Channel #4
Quad	Quad Display
◀◀	Rewind
▶	Play / List Recordings
▶▶	Fast Forward
●	Record
	Pause
■	Stop Recording / Playback
Menu	Enter / Exit Menu
▲	Move Up / Left
SEL	Select / Modify Item
▼	Move Down / Right

Chapter 3: Installation - 3.1 Hard Drive Installation

This unit has been factory fitted with a 320GB WD AV Surveillance Hard Disk; please return to the supplier for service or upgrades.

Chapter 3: Installation - 3.2 Connecting Camera and Monitor

There are 4 camera inputs and 1 video output (*Refer to 2.2 Rear Panel*).

Chapter 3: Installation - 3.3 Connecting Power Supply



(*Refer to 2.2 Rear Panel*).

Please use only the power adapter supplied.

Use of any other power source may void your warranty.

Chapter 4: System Bootup - 4.1 Detecting Installed HDD



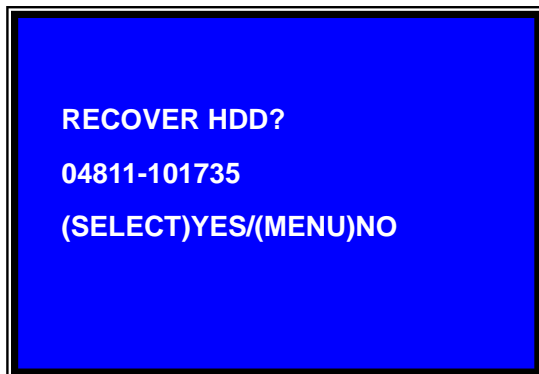
Checking HDD
MASTER...

After connecting power, the system will boot-up and detect the installed hard drive.

The on screen display will show the hard drive information.

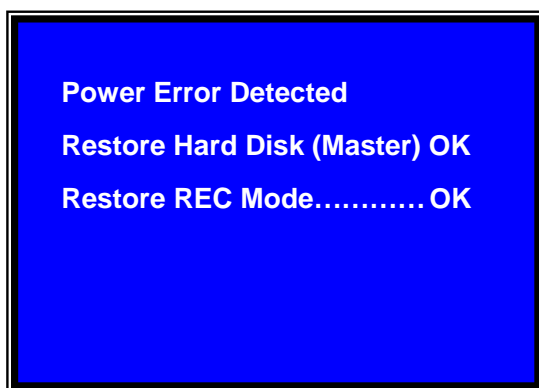
Please note that the displayed capacity will be lower than the rated capacity due to space allocated to the file system.

Chapter 4: System Bootup - 4.2 Recovering File System Errors



A power failure may cause errors in the file system. If errors are detected the DVR will give you the option to repair the errors.

Chapter 4: System Boot - 4.3 Restore Recording Feature



If a power failure occurs whilst the system is recording the DVR will automatically resume recording once power is restored.

Note: If errors are detected these will need to be corrected first. (**Refer to 4.2 Recovering File System Errors**)

Chapter 4: System Boot - 4.4 Main Screen



While the DVR is operating the monitor will display the following information:-
Upper left: Percent of hard drive space used.

Middle: Channel name (CH1 - CH4).

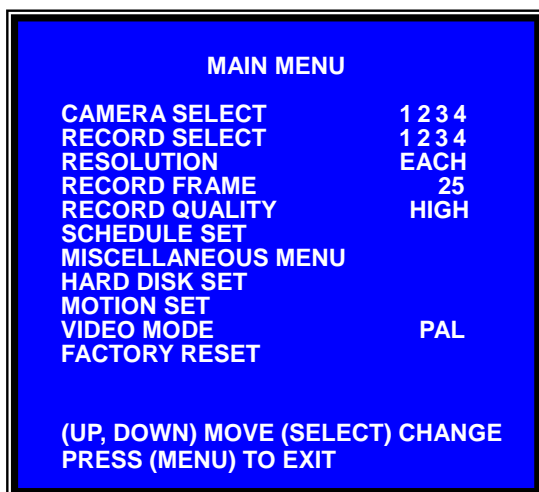
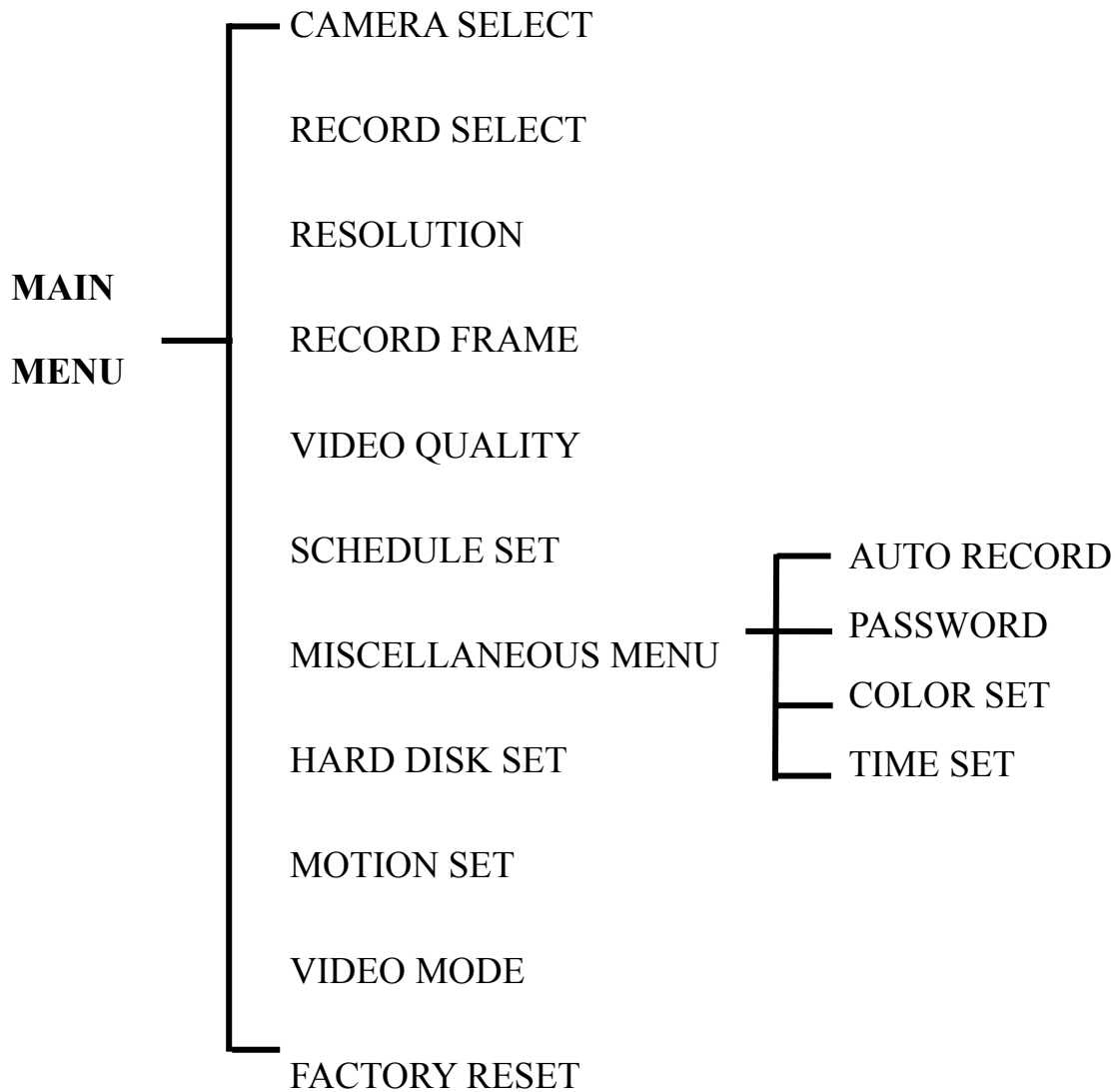
Bottom right: Date and Time


Bottom left: System status.

(**Refer to 6.1 Start Recording**)

Chapter 5: DVR Setup - 5.1 Setup Menu

Menu Directory



[ **Menu**]: Enter menu.

[ **Up**] and [ **Down**]: Move the cursor.

[ **SEL**]: Select/Modify Settings.

[ **Menu**]: Press again to exit.

Chapter 5: DVR Setup - 5.2 Camera Select



The DVR can display 4 cameras in the one screen (Quad Mode). Each channel can be enabled / disabled in case one or more camera inputs are not being used.

Press [**↔SEL**] to modify this setting, or press [**CH1**] - [**CH4**] to view each channel separately.

If a channel is disabled, the system will display “**OFF**” on the monitor, this channel will not be displayed or recorded. *Refer to 5.3 Record Select*

Chapter 5: DVR Setup - 5.3 Record Select

This option allows you to select which channels will be recorded.

Note: If no channels are selected an error message saying “record fault” and “no record channel” will appear briefly on the screen when the record button is pressed or scheduled / motion recording is started.

Chapter 5: DVR Setup - 5.4 Resolution

There are two modes of operation for recording resolution:

1. EACH MODE:

The DVR compresses and records each video channel separately so you can enlarge a single channel to a full screen display whilst still recording on all channels. In this mode you can also record specific channels, for example, you could turn off recording on CH1 and CH2 and the system would only record video on CH3 and CH4.

Press [**CH1**], [**CH2**], [**CH3**] or [**CH4**] to enlarge that channel to a full screen display.

In EACH Mode you can also use the **Auto Switch Function**.

Auto Switch Function:

When the system is in live view or recording mode, press and hold the [QUAD] button for three (3) seconds to enable the auto switch function.

In auto switch mode each screen / channel will be displayed for three (3) seconds, including the “Quad” view. This process will continue until any button is pushed.

For example, pressing [■ Stop] will stop the auto switch function and may stop the unit recording. (depending on “Record Schedule” settings)
(Refer to 5.7 Schedule Set).

2. QUAD MODE:

The DVR will compress and record all 4 channels into one file; therefore, you cannot enlarge a single channel to full screen in play back mode or live monitoring mode.

Note: The “Auto Switch” function is not available in QUAD MODE.

Chapter 5: DVR Setup - 5.5 Record Frame

Record frame(rate) will affect the appearance of moving objects in the recorded video. Higher framerates will show fast movement more clearly, however, they also use more hard disk space.

The systems default value is 25fps (frames per second), which means the system will record 25 frames per second shared by all cameras. You can set the frame rate to 25, 12, 8, 6,4,3,2 or 1 frame per second.

Chapter 5: DVR Setup - 5.6 Record Quality

There are three levels of recording quality: High, Normal and Low.

The higher you set the quality setting the more hard disk space will be used.

Chapter 5: DVR Setup - 5.7 Schedule Set

In this option you can configure recording by Time or Motion Triggered Recording.



“-” No Recording.

“T” Time (System Default).

“M” Motion Detection Triggered.

[▲Up] and [▼Down]: To move the cursor.

[←SEL]: To modify the recording method.

The numbers along the bottom indicate the 24 hours of a day.

For example:

If you want to record using the motion triggered recording method from 3 to 6AM set the time points (3, 4, 5, 6) to “M”; if you want to continuously record from 7 to 12PM set the time points (19, 20, 21, 22, 23, 24) to “T”.

Both of the recording methods need to be initiated by pressing the [● REC] button. After pressing the [● REC] button, if the schedule is set to “T” at that time the DVR will start to record immediately; if the schedule is set to “M” the DVR will start recording when motion is detected by the system.

Forced Recording:

When DVR is set to record using motion detection, the DVR will not record if the motion is lower than the threshold selected. If you want to record immediately press and hold the [● REC] button for 5 seconds and the DVR will start recording regardless of whether or not the level of motion is above the selected threshold.

Chapter 5: DVR Setup - 5.8 Miscellaneous Menu-Auto Record

When this function is set to “ON”, the DVR will return to scheduled recording five (5) minutes after the last user operation. This is useful if for example you forget to start recording again after stopping the unit to review the recorded footage.

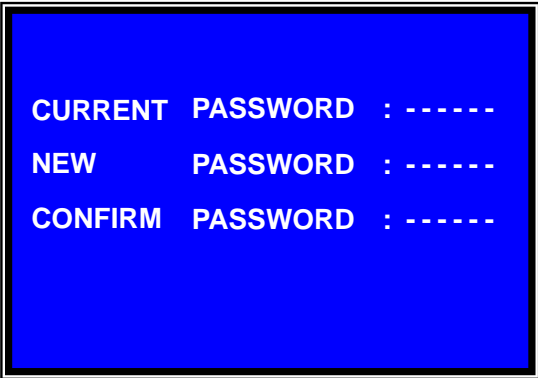
When you choose “OFF” the DVR will not start recording again until you press the [● REC] button.


Chapter 5: DVR Setup - 5.9 Miscellaneous Menu-Password Enable

When this option is “ON”, you will be required to enter the password if you want to stop recording or enter the menu.

System default password: Press [CH1] button six (6) times.

Chapter 5: DVR Setup - 5.10 Miscellaneous Menu-Password Change




All keys can be used for the password key **except** the [Menu] key, which is used to exit.

Note: If you forget your password *refer to 5.16 Factory Reset.*

Chapter 5: DVR Setup - 5.11 Miscellaneous Menu-Color Set



HUE: 0-99
SATURATION: 0-99.
CONTRAST: 0-99.
BRIGHTNESS: 0-99.

[▲Up] and [▼Down]: Move the cursor.
[REW]: Decrease the value.
[FWD]: Increase the value.
[CH1-CH4, QUAD]: Channel select.
[Menu]: Exit.

Chapter 5: DVR Setup - 5.12 Miscellaneous Menu-Time Set



Configures the system date and time:
[▲Up] and [▼Down]: Move the cursor.
[↵SEL]: Modify the value.
[Menu]: Exit and save.

Chapter 5: DVR Setup - 5.13 Hard Drive Setup



OVERWRITE ENABLED:

If you choose “**YES**” and the hard disk becomes full the DVR will automatically overwrite the oldest footage on the disk.

If you choose “**NO**” recording will stop when the hard drive becomes full.

HDD SIZE: Indicates the total capacity of the hard drive installed in the DVR.

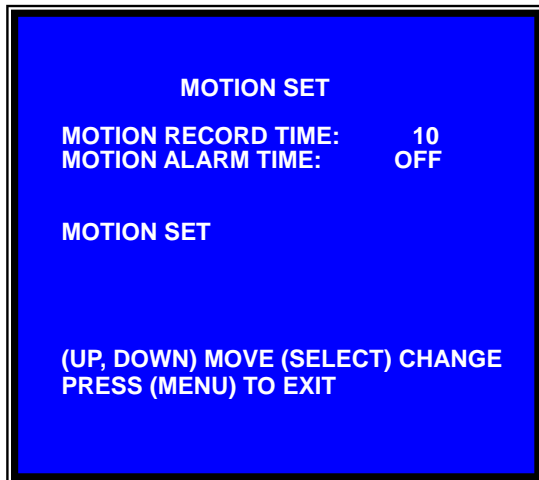
HDD USED: Indicates the space used in the hard drive as a percentage.

HDD FORMAT: If you format the hard drive, it will erase all the data in the disk.

Note: You will need to input your password when you want to format the HDD.

Note: When you first purchase the DVR or when you install a new hard drive, please use this function to format the drive.

Chapter 5: DVR Setup - 5.14 Motion Set



MOTION RECORD TIME:

This adjusts how long recording continues after the DVR has last been triggered by motion.

MOTION ALARM TIME:

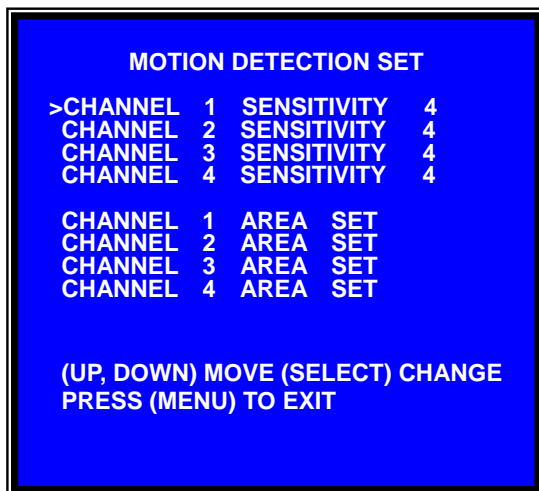
This adjusts how long the buzzer will sound after the DVR has been triggered by motion.

Note: Both values are shown in seconds.

CONT: Continuous alarm. (Requires you press a key to stop the alarm)

OFF: No alarm.

MOTION SET:



SENSITIVITY:

Press [←SEL] to adjust the sensitivity of the motion detection on each channel where “1” is the highest sensitivity and “9” is the lowest.

When the sensitivity is set to “OFF”, the unit will not be triggered by motion on this channel.

AREA SET:

Press [←SEL] button to enter the detection area of each camera.

Note: The image is divided into 16 (4*4) blocks.

Press [REW] and [FWD] to move the cursor left and right.

Press [▲Up] and [▼Down] to move the cursor up and down.

Press [←SEL] to set add / remove the block from the detection area.

Note: Make sure the appropriate times in **Record Schedule** are set to “M” for motion based recording to function.

Chapter 5: DVR Setup - 5.15 Video Mode

This option enables you to select between PAL and NTSC video formats.

This unit comes packaged with PAL format cameras for use in your region; as such you should not change this setting.

Chapter 5: DVR Setup - 5.16 Factory Reset

Press the [**↵SEL**] button to restore the unit to default, the DVR will reboot and all settings (including the password) will be restored to the factory default settings.

Caution: There is no confirmation dialog box after pressing the [↵SEL**] button!**

If you have forgotten your password:

And the unit is not recording; keep the system on the main screen, and then press the [**Pause**] button ten (10) times in succession, the DVR will then reboot with default settings. Note: The default password is the [**CH1**] button six (6) times.

If the DVR is recording, you will need to disconnect the HDD to force the machine to stop recording prior to resetting the machine to default.

Chapter 6: Recording - 6.1 Start Recording

Press [● REC] to start recording (as configured in **5.7 Schedule Set**).

The DVR will display the following information on screen.



1. Hard Drive Usage. (Displayed as a percentage)
2. Recording Symbol. (Channel is currently recording)
3. Channel Name.
4. Record Resolution. (QUAD or EACH)
5. Status. (REC, Play, FF1, FF2, FF3, REW, PAUSE)
6. HDD Info. ([1] Master Hard Disk)
7. Record Schedule: (T) Continuous (M) Motion Detection (-) No Recording
8. The date and time.

Chapter 6: Recording - 6.2 Stop Recording

Press the [■Stop] button to stop recording. If you have enabled password protection, you will need to enter the password.

Chapter 6: Recording - 6.3 Recording Time on Hard Drive

The estimated recording time is based on a 320GB Hard Drive with the unit in QUAD mode. (Times are shown in hours)

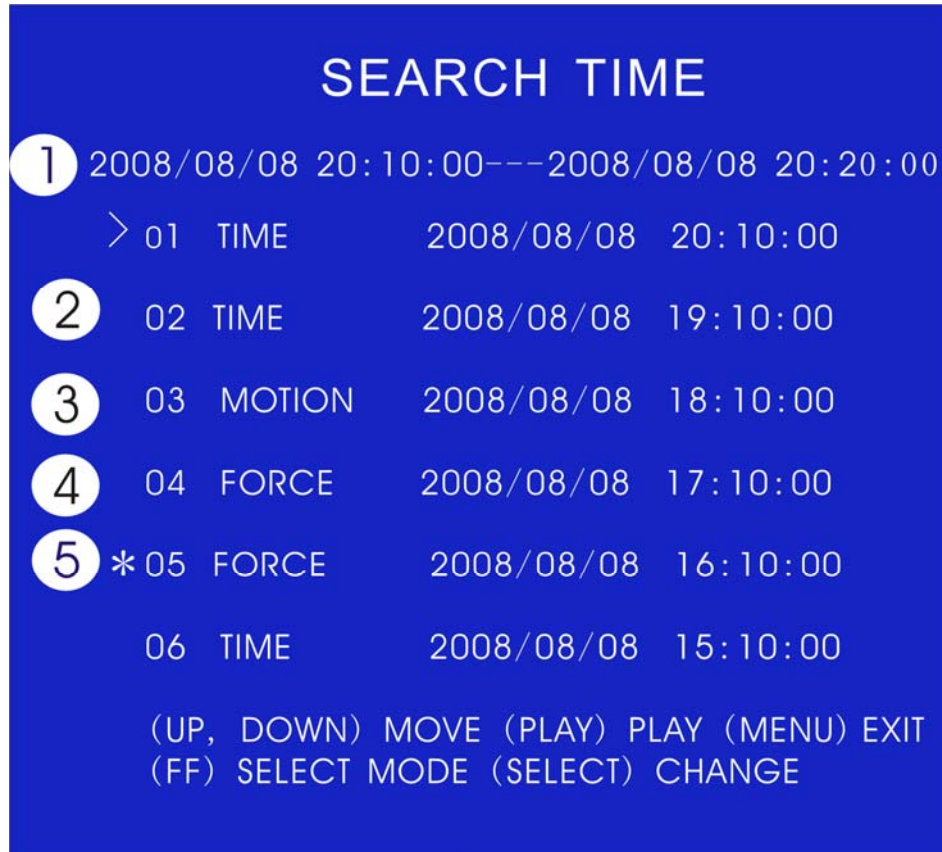
System	Quality	Frame Rate	25	12	6	1
PAL	HIGH	20 K Bytes	186	388	777	4662
	NORMAL	15 K Bytes	249	518	1036	6216
	LOW	12 K Bytes	311	647	1294	7764

Chapter 7: Playback

Press the [►Play] button to play the latest recording.

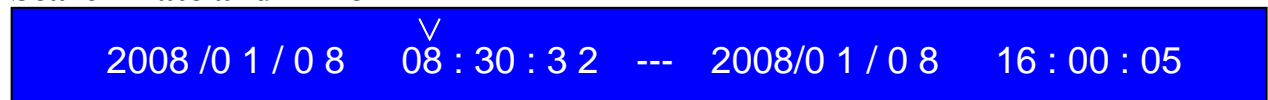
During playback, press the [Menu] button to list all recorded video clips from the hard drive. The newest videos will be listed at the top.

Press the [▲Up] and [▼Down] buttons to move the cursor and select an event, press the [►Play] button to start playback.



1. Start and end time of the event	2. TIME: continuous record
3. MOTION: Motion triggered event	4. FORCE: Forced recording event
5. "*" marks unplayed video recordings	

Search Date and Time



You can also playback recorded video by selecting an exact date and time as follows:

1. Press the [FWD] button to change the search mode.
2. Press the [▲Up] and [▼Down] buttons to move the cursor.
3. Press the [←SEL] button to edit the time / date value.
4. Press the [►Play] button to begin playback.

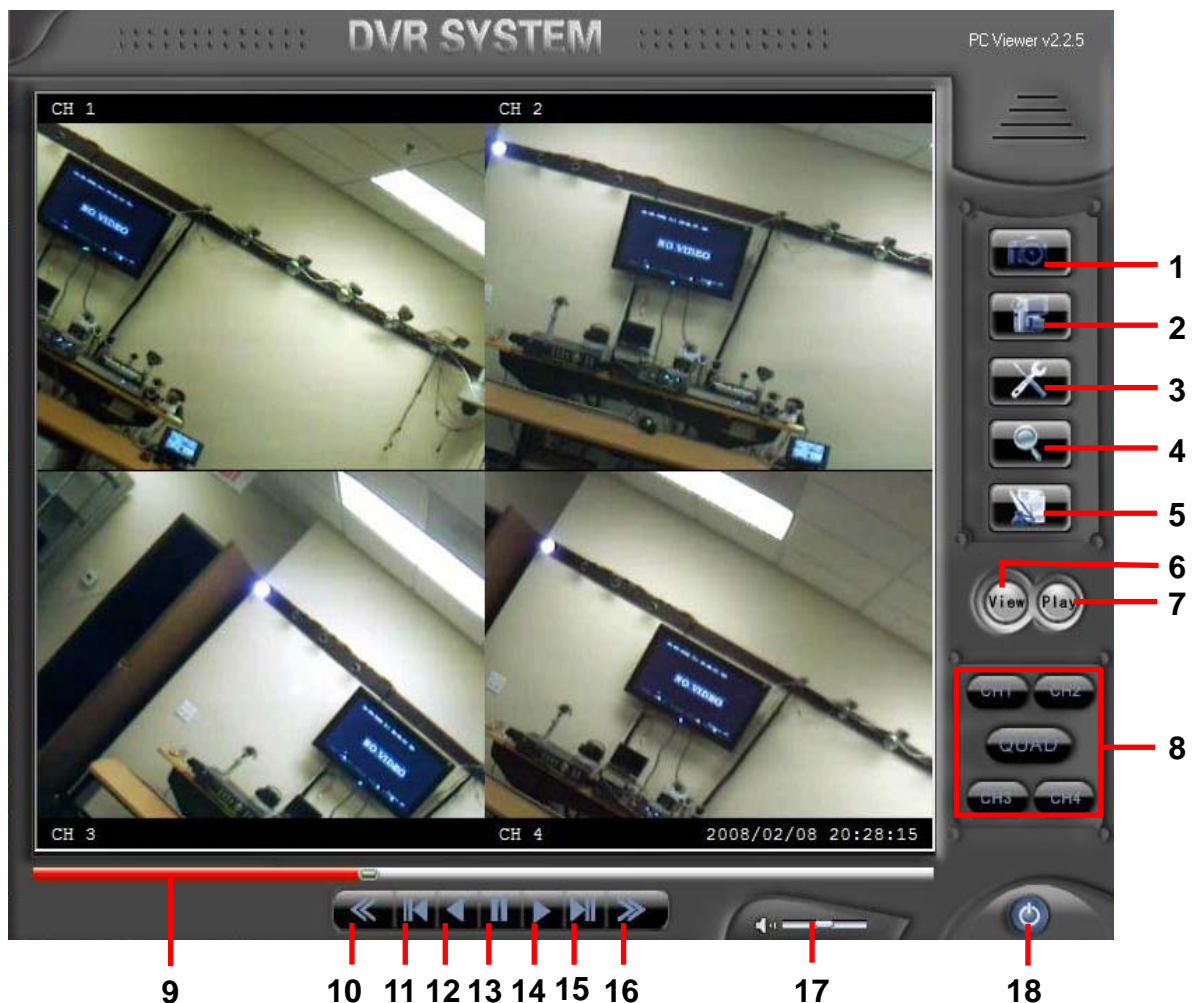
Chapter 8.1: Installing the PC Viewer Program

By connecting the DVR to your PC you can use the included “PC Viewer” software to backup and play back the recorded video using your PC.

Insert the included application CD into your CD-ROM Drive.

1. Select “Open folder to view files” from the Windows® autorun options.
2. Double click on the “PCViewerInstall.exe” file and follow the on screen instructions to install the PC Viewer software to your PC.
3. Run the installed PC Viewer program. When you connect the USB cable from the DVR to your PC Windows® will detect the hard drive installed inside the unit as a “removable disk”.

Chapter 8.2: PC Viewer Interface





Item	Remark
1. Capture picture	Save an image of current frame
2. Save video clip	Save the current video clip to PC
3. Directory Setting	Change the capture directory on the PC
4. Time Search	Search for recorded video by time
5. DVR event list	Open the event list from DVR
6. DVR Mode*	Switches between PC viewer mode and DVR viewer mode
7. PC Mode*	
8. Channel selection keys	CH1, CH2, CH3, CH4, QUAD
9. Playing scroll bar	Quickly jump to a certain part of the video
10. Fast reverse	Play backwards at fast speed
11. Previous frame	Move to the previous frame
12. Reverse	Play backwards at normal speed
13. Pause	Pause playing
14. Play	Play forwards at normal speed
15. Next frame	Move to the next frame
16. Fast forward	Play forwards at fast speed
17. Volume scroll bar	Not relevant to this model
18. Exit	Exit the PC Viewer

★ **DVR Mode:** Plays video clips saved on the DVR's HDD.

★ **PC Mode:** Plays video clips (.mys file) saved on the PCs hard drive

Chapter 8.3: PC Backup

8.3 PC Backup

Press the  button to open the DVR's event list, then select an event and press  to start the backup procedure. The video file you want to save on PC can be saved as an ".avi" file or ".mys" file.

Chapter 9.1: DVR Specifications

ITEM		DESCRIPTION	NOTE
Operating System		Custom Vineyard ASIC	
Camera Inputs		4	4p mini-din socket
Video Outputs		1	BNC socket
Display Frame Rate		100 frames/second	4 × 25 fps
Recording Frame Rate (Quad)		Max.25 fps	
Recording Frame Rate (Each)		25 fps ÷ Number of Cameras	Max. 25 fps (Global)
Record Mode		Continuous, Time Schedule, Motion Triggered.	
Resolution	Display	720 × 576	
	Record	320 × 136 (QUAD) 640 × 272 (EACH)	QUAD: 640 × 272
Video Compression Format (Each Channel)		Modified Motion-JPEG (12-20K bytes/frame)	Low : 12K Byte Normal: 15K Byte High : 20K Byte
HDD		320GB	SATA Interface
Estimated Record Length		320GB Hard drive @ 6 frames per second & Normal Quality = 1036Hours	
USB		For PC playback & backup	USB 2.0
Remote Control		Included	
Search	Method	Time、Date、Event	
	Full Screen	YES	
Dimension (L × W × H)		250 × 235 × 38mm	

Chapter 9.2: Camera Specifications

Image Sensor: 1/4" Color CMOS
 Resolution: 350 TVL
 Minimum Illumination: 1.5Lux/F2.0 (IR off)
 Lens: 3.6/6.0mm
 Power Requirements: DC 12V 50mA
 Dimensions: 46(Ø) x 107(L)mm
 Operating Temperature: -20°C - +50°C
 Video Output: 1.0Vp-p 75Ω
 S/N ratio: >48Db

Chapter 10: Appendix -10.1 Connection Diagram



Chapter 10: Appendix - 10.2 DVR Accessories (included)



Power Cord

Note: The plug will vary depending on target market.



Remote Controller



Power Adaptor



User's Manual



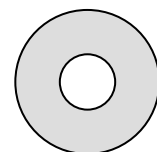
15M Video and Power cable X 2



2 x IR Cameras



USB Cable



CD-ROM

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